

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Fabrice POPPE, et al. Attorney Docket Q64941

Appln. No.: Not Assigned Group Art Unit: Not Assigned

Confirmation No.: Not Assigned Examiner: Not Assigned

Filed: July 03, 2001

For: METHOD TO SET UP A VOICE OVER INTERNET PROTOCOL COMMUNICATION

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to examination, please amend the above-identified application as follows:

IN THE SPECIFICATION:

Page 1, after the title, insert the heading:

Background of the Invention

Page 3, before the first full paragraph beginning with "An object", insert the heading:

Summary of the Invention

Page 10, before the first paragraph, insert the heading:

Brief Description of the Drawing

before the second full paragraph beginning with "The working" insert the heading:

Detailed Description of the Invention

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IN THE CLAIMS:

Please enter the following amended claims:

4. (Amended)The method according to claim 1, characterized in by adapting said plurality of parameters also during said voice over Internet Protocol communication.

5. (Amended)The method according to claim 1, characterized in that said air interface is a Universal Mobile Telecommunication System air interface.

6. (Amended)The method according to claim 1, characterized by implementing said second device (T2) by a voice over Internet Protocol gateway.

7. (Amended)The method according to claim 1, characterized by implementing said second device (T2) by an Internet Protocol terminal.

8. (Amended)The method according to claim 1, characterized in by defining said trade-off according to predefined user preferences of a user desiring to set up said voice over Internet Protocol communication.

9. (Amended)The method according to claim 1, characterized in by defining said trade-off according to predefined operator preferences of an operator exploiting said base station (BS).

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10. (Amended) The method according to claim 1, characterized in that said step of determining said values for said plurality of parameters comprises

- a) defining a plurality of mouth to ear delay versus distortion planes, each plane being associated to a combination of a value for said power budget and a value for said channel code; and
- b) determining in each plane of said plurality of mouth to ear versus distortion planes a numerical model comprising constant-rating curves, each one of said constant rating curves reflecting a user quality of said voice over Internet Protocol communication;
- c) determining working points, in each mouth to ear delay versus distortion plane, for each combination of a number of voice words and a choice for an interleaving scheme whereby a higher number of voice words reflects a higher bandwidth efficiency, said mouth to ear delay being determined in function of detailed information about the characteristics of the different transport stages a packet of said voice over Internet Protocol communication goes through, said distortion being determined in function of different packet loss probabilities; and providing thereby a total set of working points; and
- d) determining according to said desired trade-off an optimal working point out of said total set of working points, said optimal working point being located in a region of one of said mouth to ear delay versus distortion planes, that is bounded by a constant rating curve that reflects said predefined user quality and said optimal working point being associated according to said step c) to a predefined maximum number of voice words.

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16. (Amended) A telecommunication network, characterized in that said telecommunication network comprises a device according to claim 12.

IN THE ABSTRACT:

Please delete the present Abstract of the Disclosure and replace it with the following new Abstract of the Disclosure.

ABSTRACT

The invention concerns a method to set up a voice over Internet Protocol communication between a mobile terminal (MT) and a second device (T2) whereby the voice over Internet Protocol communication comprises an air interface between the mobile terminal (MT) and a base station (BS) which is coupled via an access network and an Internet Protocol network to the second device (T2). The method comprises a step of determining, according to predefined rules and conditions, during call set-up appropriate values for a plurality of parameters which are characterizing the voice over Internet Protocol communication in order to realize a desired trade-off between a predefined user quality of said voice over Internet Protocol communication and a predefined bandwidth efficiency.

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REMARKS

Entry and consideration of this Amendment is respectfully requested.

Respectfully submitted,



David J. Cushing
Registration No. 28,703

SUGHRUE, MION, ZINN,
MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, D.C. 20037-3213
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

Date: July 3, 2001

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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

The specification is changed as follows:

Section headings were added on pages 1, 3, 8 and 9.

IN THE CLAIMS:

The claims are amended as follows:

4. (Amended)The method according to ~~any previous claim~~claim 1, characterized in by adapting said plurality of parameters also during said voice over Internet Protocol communication.

5. (Amended)The method according to ~~any previous claim~~claim 1, characterized in that said air interface is a Universal Mobile Telecommunication System air interface.

6. (Amended)The method according to ~~any previous claim~~claim 1, characterized by implementing said second device (T2) by a voice over Internet Protocol gateway.

7. (Amended)The method according to ~~any one of claim 1 to claim 5~~claim 1, characterized by implementing said second device (T2) by an Internet Protocol terminal.

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8. (Amended)The method according to ~~any previous claim~~claim 1, characterized in by defining said trade-off according to predefined user preferences of a user desiring to set up said voice over Internet Protocol communication.

9. (Amended)The method according to ~~any previous claim~~claim 1, characterized in by defining said trade-off according to predefined operator preferences of an operator exploiting said base station (BS).

10. (Amended)The method according to ~~any previous claim~~claim 1, characterized in that said step of determining said values for said plurality of parameters comprises

a) defining a plurality of mouth to ear delay versus distortion planes, each plane being associated to a combination of a value for said power budget and a value for said channel code; and

b) determining in each plane of said plurality of mouth to ear versus distortion planes a numerical model comprising constant-rating curves, each one of said constant rating curves reflecting a user quality of said voice over Internet Protocol communication;

c) determining working points, in each mouth to ear delay versus distortion plane, for each combination of a number of voice words and a choice for an interleaving scheme whereby a higher number of voice words reflects a higher bandwidth efficiency, said mouth to ear delay being determined in function of detailed information about the characteristics of the different transport stages a packet of said voice over Internet Protocol communication goes through, said

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distortion being determined in function of different packet loss probabilities; and providing thereby a total set of working points; and

d) determining according to said desired trade-off an optimal working point out of said total set of working points, said optimal working point being located in a region of one of said mouth to ear delay versus distortion planes, that is bounded by a constant rating curve that reflects said predefined user quality and said optimal working point being associated according to said step c) to a predefined maximum number of voice words.

16. (Amended) A telecommunication network, characterized in that said telecommunication network comprises a device according to ~~any one of claim 12 to claim 15~~
claim 12.

IN THE ABSTRACT OF DISCLOSURE:

The abstract is changed as follows:

ABSTRACT

~~METHOD TO SET UP A VOICE OVER INTERNET PROTOCOL
COMMUNICATION~~

The invention concerns a method to set up a voice over Internet Protocol communication between a mobile terminal (MT) and a second device (T2) whereby the voice over Internet Protocol communication comprises an air interface between the mobile terminal (MT) and a base station (BS) which is coupled via an access network and an Internet Protocol network to the second device (T2). The method comprises a step of determining, according to predefined rules and conditions, during call set-up appropriate values for a plurality of parameters which are

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characterizing the voice over Internet Protocol communication in order to realize a desired trade-off between a predefined user quality of said voice over Internet Protocol communication and a predefined bandwidth efficiency. (Figure)